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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BOOSALIS, FANI POLYZOS	
ART UNIT	PAPER NUMBER
2884	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,541	IRANI, KEIKHOSROW	
	Examiner	Art Unit	
	Faye Boosalis	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's reply, filed 16 January 2007, has been received and entered. Claims 1-18 have been cancelled. Claims 19-22 have been added. Thus, claims 19-22 are currently pending in this application.

Response to Arguments

2. Applicant's arguments, see pages 8-22, filed 16 January 2007, with respect to the rejection(s) of claim(s) 1-18 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Herring et al (US 6,144,031 A)* and *Marshall et al (US 6,515,285 B1).*

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Regarding claim 19, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

5. Claim 19 is objected to because of the following informalities: "Mikron Infrared Company's Model # 7200" cannot be used in the claim to refer to similar instruments. Appropriate correction is required.

6. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. The term, "Mikron Infrared Company's Model # 7200," renders the claim indefinite for comparing the invention to other known thermal imaging instruments.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Herring et al (US 6,144,031 A)* in view of *Marshall et al (US 6,515,285 B1)*

Regarding claim 19, Herring discloses a method for enhancing the capabilities of a portable, hand-held lightweight thermal imaging instrument so as to permit thermal imaging of target surface(s) (502) (i.e. black body radiator) having lower temperatures typically near 22 degrees Celsius (col. 8, lines 44-50), the instrument (100) including a housing (110) having an opening (1790) for admitting infrared rays including those emanating from the target surface(s), the rays directed along an optical path within the housing (See Figs. 2 and 10); the optical path having an optical axis (A1), an optical assembly (1030) (mult-element lens) (col. 13, lines 43-49) positioned within the housing and in the optical path, the optical assembly (1030) having an input and an output, the infrared rays directed towards and into the input, through and out of the output of the optical assembly (mult-element lens, i.e. (L1) and focus mechanism (1070) (col. 13, lines 59-62), an un-cooled focal plane array (180) (UFPA), infrared ray detector (UFPA

detector) (130) including a detecting surface (180), the UFPA detector positioned in the housing (col. 8, lines 7-10) and in the optical path so as to allow the impingement of infrared rays passing out of the optical assembly onto the detecting surface (col. 12, lines 8-21), the UFPA detector further including a spectral transmission window (1790) positioned in the optical path between the output and the detecting surface (See Fig. 2 and col. 7, lines 59-62), the UFPA detector providing an electrical output proportional to the energy of the infrared rays impinging onto the detecting surface, the method comprising the steps of: (a) disposing and coaxially aligning each lens (L1)(L2) along the optical axis (A1) (See Fig. 10 and col. 12, lines 47-65); employing a filter assembly (680) to block unwanted rays entering from the target surface (520) (col. 13, lines 20-33); providing electronic means responsive to the electrical output of the UFPA to determine target surface temperatures (col. 6, lines 26-47). Herring et al. is silent with regards to employing; germanium-type lenses, an approximate spectral bandwidth range for the spectral window, band pass filter with an approximate bandwidth range.

Marshall discloses a method for thermal imaging of target surface(s) having different temperatures within a range of temperatures of interest (col. 36, lines 9-16), comprising: (b) employing a transparent material for the optical assembly (i.e. germanium) (col. 12, lines 29-35); (c) means for optimizing the spectral band width of UFPA detector to 3 um to 14 um includes spectral transmission window (88) positioned in the optical path between the output and the detecting surface, the spectral transmission window having a spectral band with of 3 um to 14 um (See Fig. 1A and col. 31, lines 30-48); (d) filtering means (236) including a first and second infrared band

pass filter, the first infrared band pass filter having a spectral band width of 8 to 14 um, the second infrared band pass filter having a respective spectral band width within 3 to 8 um (col. 31, lines 30-48), (e) each of the band pass filters removably interposed in the optical path upon direction of an operator for filtering the infrared rays entering the housing so as to attenuate certain infrared rays and to pass other infrared rays of particular, respective predetermined wavelengths associated with the range of temperatures of interest, the transmission wavelength of the intervening media and the absorptive wavelength of the target surface(s) (col. 39, lines 33-42); and (f)(g) electronic means (116) adapted to convert the electrical output into at least one interpretable output whereby an operator is presented with information sufficient to determine the temperature(s) of the target surface(s) within an acceptable degree of accuracy (See Figs. 28A-28C and col. 34, lines 7-31). Thus, it would have been obvious to a person having ordinary skill in the art to modify Herring et al, to use band pass filters so pass frequencies within the desired range, as taught supra by Marshall, and including programming and electronic means to determine target surface temperature with acceptable degree of accuracy, as taught by Marshall et al.

Regarding claims 20-22, Marshall discloses the device wherein the second band pass filter having pass band centered approximately 3.9 um wavelength, 5.0 um wavelength and 6.8 um wavelength (col. 31, lines 30-48).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-

2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FB

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